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Embracing 21st Century Learning or: How One Library Remixed Its Org Chart to Fully Support the Digital Assignment Lifecycle

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How One Library Remixed Its Org Chart to Fully Support the Digital Assignment Lifecycle

Jamie Calcagno-Roach
Erika Peterson

With special appearance* by:
Andrea Adams
Kevin Hegg
Grover Saunders

*Will not actually appear.

STRAIGHT OUTTA HARRISONBURG

James Madison University

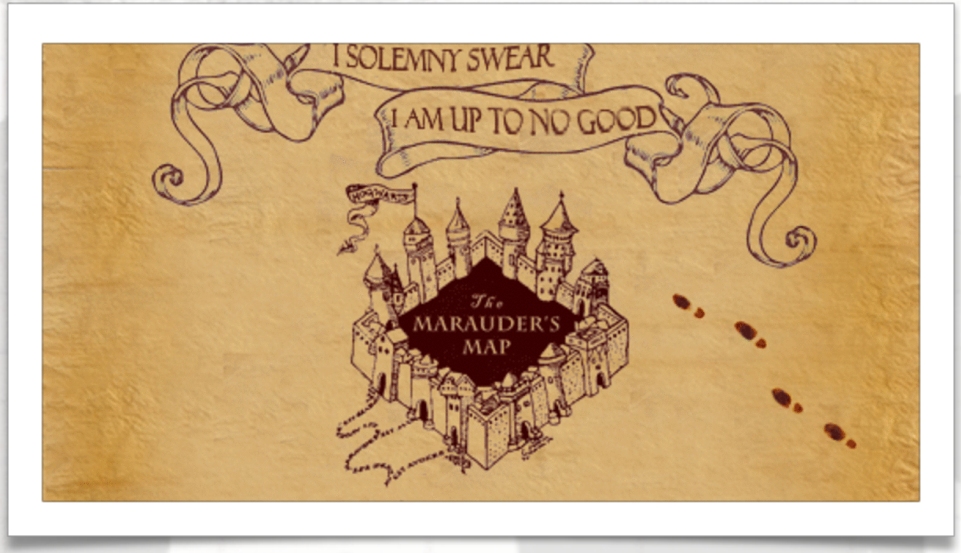
- Public University in Harrisonburg, VA
- ~20,000 students
- 38 Master's Programs
- 8 Doctoral Programs
- Emphasis on undergraduate research

- JMU Libraries strive to engage with the university's diverse communities in their creation and search for knowledge through academic resources, physical and virtual spaces and educational and research services.

INNOVATION SERVICES

LET Innovation Services creates exciting virtual and physical spaces, programs and services where the JMU community can explore, experiment, and innovate in their teaching, learning, and scholarship.

GUIDING PRINCIPLES



Democratizing
Available to everyone on campus with as few barriers to entry as possible.

Nexus
Interdisciplinary and neutral space for people to collaborate.

Agile
Both in our ability to respond and predict needs.

Outreach & Programming
Allow opportunities for people to show off their work.

METHODOLOGY

Stakeholder Feedback

Peer Institutions

Existing Reports

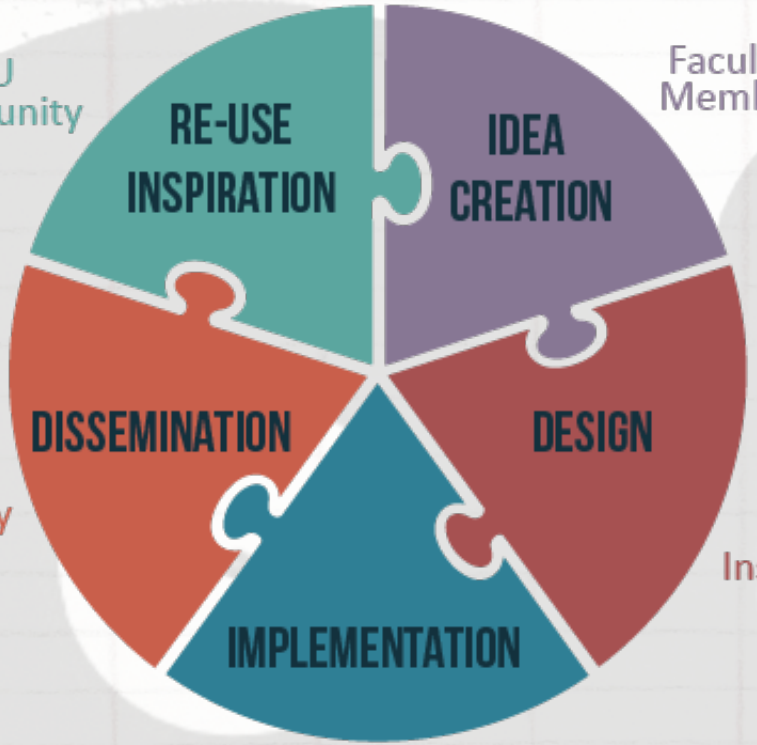
Local Facilities

SITE VISITS

We did them.
A lot.

Simon Fraser University
University of Victoria
University of Queensland
University of Melbourne
Monash University
University of Adelaide
McGill University
University of Ottawa
McMaster University
University of Toronto
Simon Fraser University
University of Victoria

DIGITAL ASSIGNMENT LIFECYCLE



JMU Community

Faculty Member

Digital Collections
Liaison Librarians
Data Services
Special Collections
Instructional Designers

Innovation Instruction
Digital Projects
Innovation Spaces

Digital Projects
Digital Collections
Classroom Technology Services


JEWEL STORE
TODO
Evaluate security
Photograph interior
Decide approach
Pick crew
Get exterminator equip
Get BZ gas canisters
APPROACH
CREW
EDDIE
TOM
Driver
Driving Skill
Composure
Vehicle Choice
Cut
NORM
RICHARDS
Gunman
Mist Health
Accuracy
Shoot Rate
Weapon Choice
Cut
PAIGE
HARRIS
Hacker
Cut
THE
BLUEPRINT

RECYCLE, REUSE

We started by creating a new Innovation Services department from components of existing departments.

This allowed us to start quickly and minimize costs.

THE BLUEPRINT

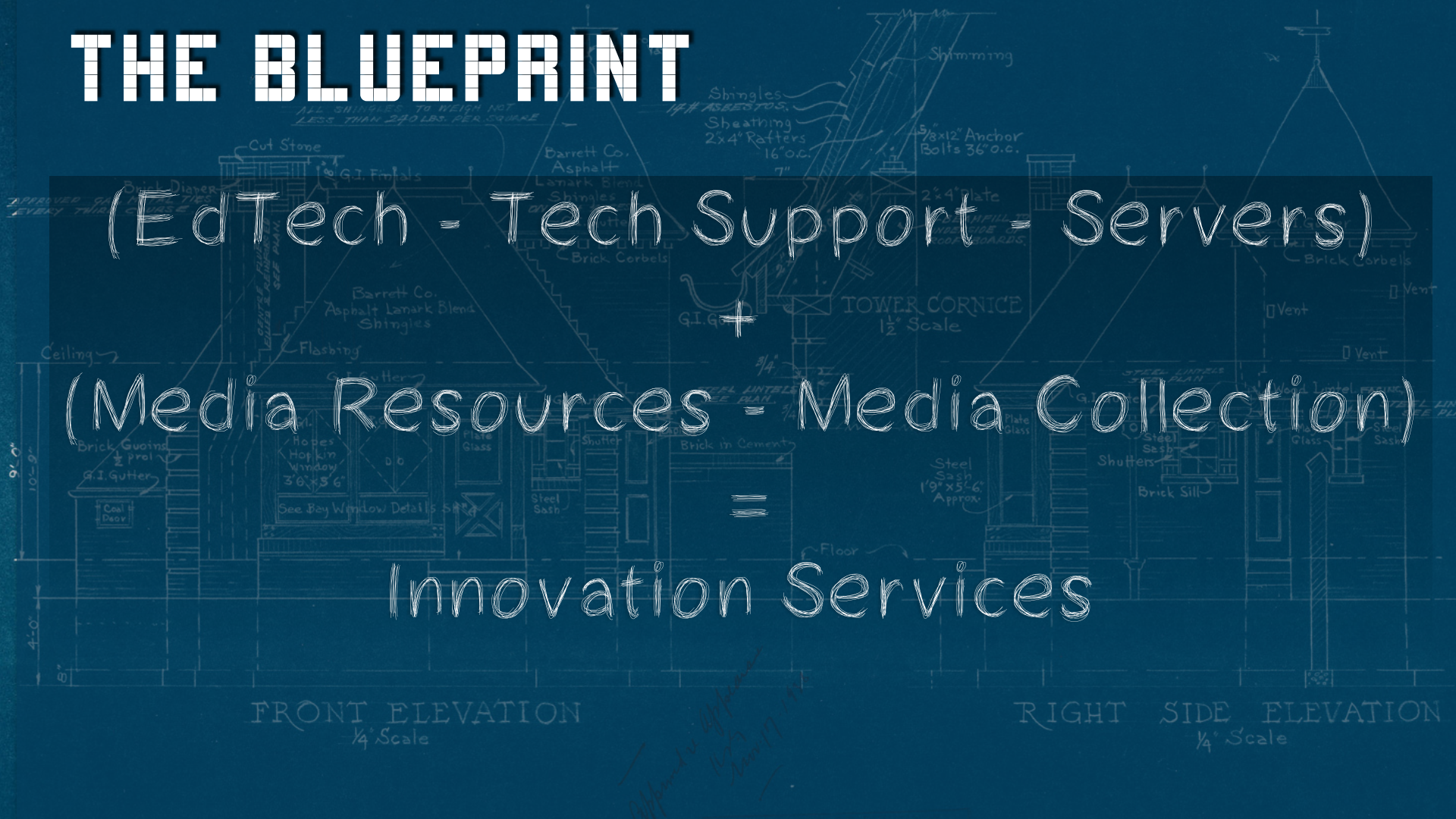
(EdTech - Tech Support - Servers)

+

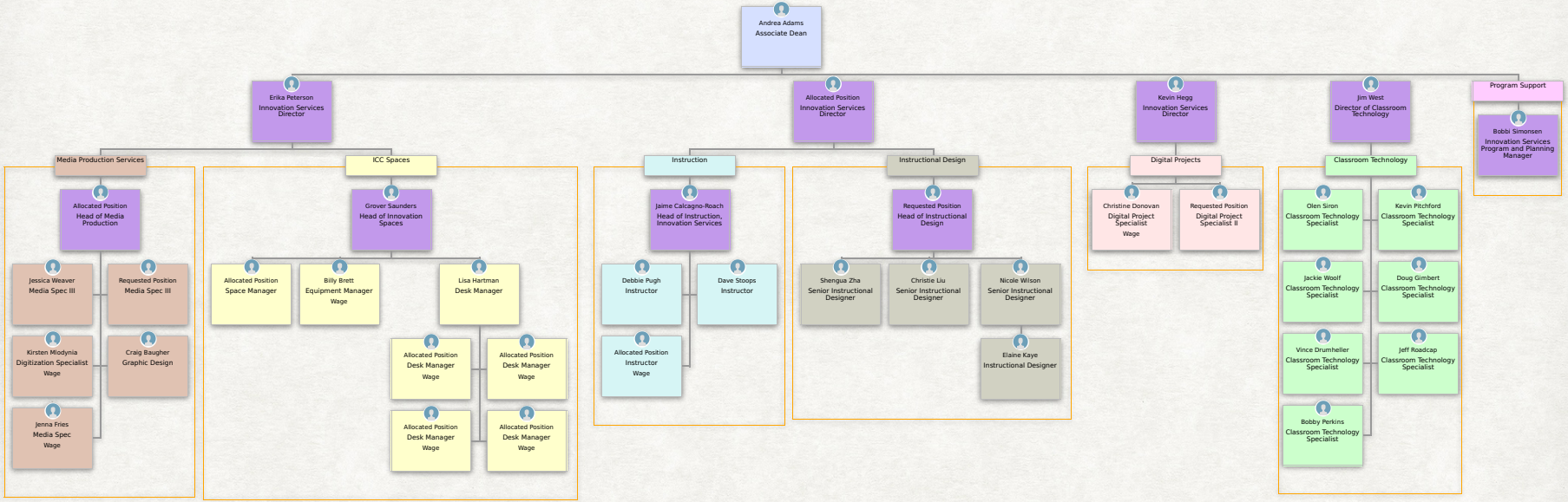
(Media Resources - Media Collection)

=

Innovation Services



YE OLDE ORG CHART



BABY STEPS

We have to be open to seeing where we can build strong connections all across the university.

We have to listen to our users about what they need.

ONE DAY IT'LL ALL MAKE SENSE

Marketing and branding both internally and externally.

Creating a network of innovation spaces on campus.

The scholarship and preservation connection.

How to facilitate long-term, resource-intensive projects.

LESSONS LEARNED

We will always have plenty of known unknowns and unknown unknowns.

Working quickly allowed us to skip a lot of classic pitfalls, but created a lot of uncertainty for everyone.

Team building neglected due to understaffing (still understaffed).

Saying “It’s Okay to Fail” is easy to say and hard to do.

CASE STUDIES

HIST 362: 3D SCANNING

- ***HIST 362 (Introduction to U.S. Religious History) Taught by Dr. Andrew Witmer***
- Used a combination of 3D scanners and photogrammetry to accurately re-create religious artifacts.
- Working closely with an actual physical object to create a 3D model offered opportunities to handle the stuff of religious life, attending to its feel, heft, dimensions, and materials.
- Students also grappled with the religious significance of the artifacts. Did the models retain the significance?

HARDWARE

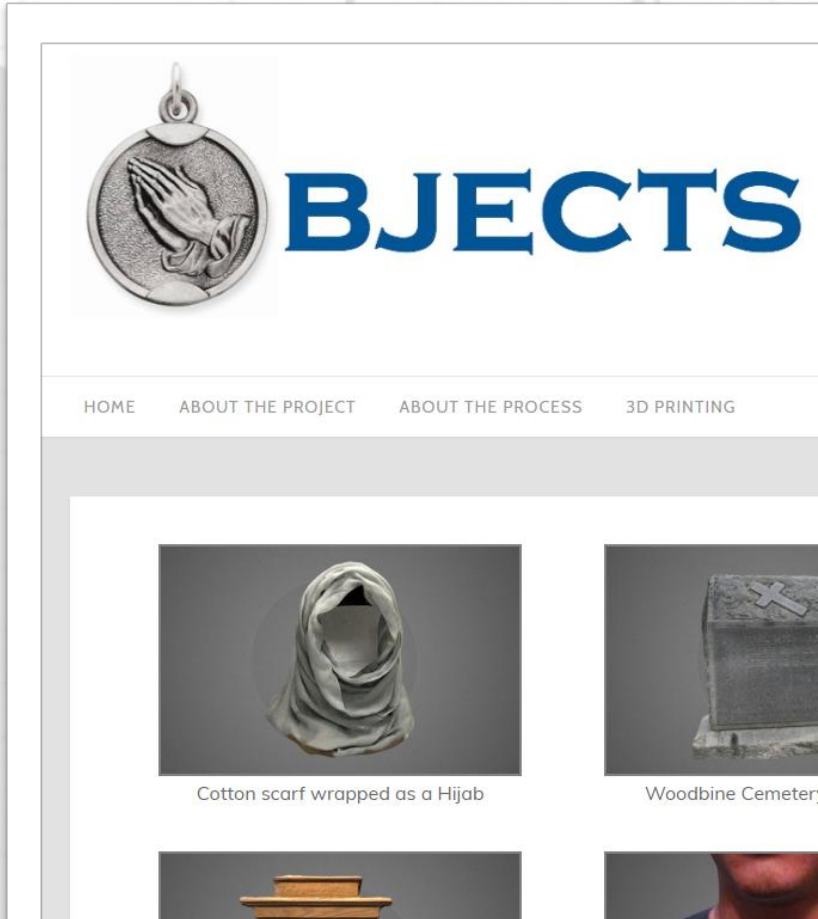
- structure.io Scanner + iPad
  - Inexpensive and easy
- Student-owned smartphones
- Ultimaker 3 3D Printer

SOFTWARE

- ItSeez3D
  - iOS App
  - SketchFab Integration
  - Free Export for EDU*
- SketchFab
  - Facilitate access to models for online viewing and 3D printing.
- Autodesk Remake*
  - Photogrammetry software.
  - *Discontinued suddenly and without warning.*

PUBLISHING PLATFORMS

- ItSeez3D users published to Sketchfab
  - Sketchfab is an online publishing platform for 3D content
  - Pro accounts is free for educational use.
- ReMake users published to Autodesk Gallery
  - Free for educational use
- Displayed via Class WordPress Site
  - http://sites.jmu.edu/ObjectsOfFaith



SUMMARY | 21 MODELS | COLLECTIONS | 0 LIKES

HIST 362 Spring 2017

SUBSCRIBE | EMBED | SHARE

0 subscribers

Evan Daruma 2 — 149 0 1

Baptismal Font Top — 114 0 0

Baptismal Font Bottom — 120 0 0

Santa figurine — 138 0 1

Gravestone — 177 0 1

Podium 2 — 181 0 5

VIEW IN VR

BJECTS OF FAITH

Cotton scarf wrapped as a Hijab

Woodbine Cemetery Headstone

Buddhist Daruma Doll

hijab 2.2

JMUHIST PRO
FOLLOWING

92 744 7

Download Add To Embed Share Report

Description | Model information

Awesome

Published 11 months ago
Uploaded with itSeez3D

IN COLLECTIONS


costumes, fashion a...
wang2dog
119 3


HIST 362 Spring 2017
JMUHIST
9 0


衣物
乾元恒
14 0

SUGGESTED MODELS


FCM Blacksmith
JMUHIST
163 0 6


Podium 2
JMUHIST
181 0 5


Daruma 1
JMUHIST
41 0 2


FCM Sarah
JMUHIST
52 0 2


BELOVED SON & BROTHER
CALVIN RAY BEACH
SEPTEMBER 5, 1957
AUGUST 25, 2012

TRAINING & SUPPORT

- Professor introduced to 3D scanning and printing through an Instructional Design and Technology sandbox series.
- Students provided hands-on workshops via MADLab Program
  - Principles of photogrammetry (how to capture a series of photographs for purposes of 3D modeling)
  - Using Autodesk ReMake to create 3D models, to clean up 3D models, and to publish 3D models
- Digital Projects and Innovation Spaces provided ongoing support and consolation to students and instructor throughout the assignment.
- The Spaces team provide access to specialized hardware (scanners, iPads, etc.) and 3D printers in the makerspace.

HIST 362 FINAL PRESENTATIONS

- Held at near the end of semester in a public meeting space on campus
- Open to the public and attended by library staff, history faculty, and JMU administrators.
- Each team presented their research and their objects virtually and physically.

BJECTS OF FAITH

HIST 362 FINAL PRESENTATIONS

Tuesday, April 25, 2017, 2:00-3:30

Madison Union 306 (Taylor Hall)

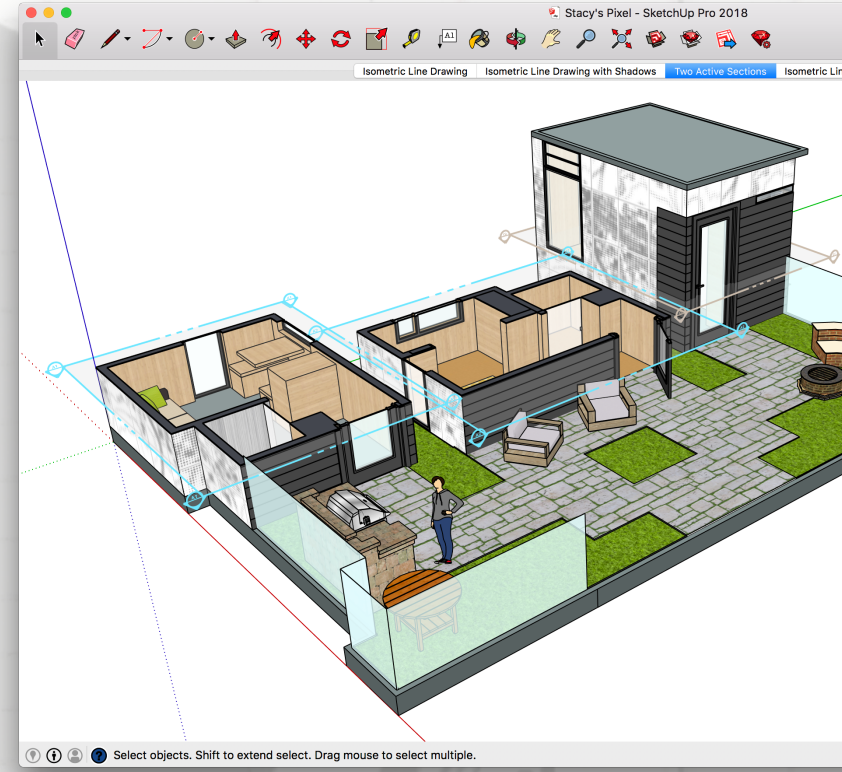
All are welcome to join as project teams from HIST 362: Introduction to U.S. Religious History present the results of their semester-long work studying, 3D modeling, and 3D printing a wide range of religiously meaningful objects.

HIST 422: HISTORIC SPACES IN VR

- ***HIST 422: The Early American Republic***
  Taught by Dr. Andrew Witmer
- Use SketchUp to reconstruct a variety of historic spaces that could be experienced in VR.
- *"deepen your understanding of the built environment of this era"*
- *"use your original research from your essay and insights from class discussions and readings to shape how you conceptualize, construct, and interpret your 3D model"*

SOFTWARE & DRAWINGS

- ***SketchUp*** is a powerful but easy to use 3D modeling application used to create architectural, engineering, and landscape drawings.
    - Free version available for EDU
- Each student selected a 2D floorplan from the Library of Congress's Historic American Buildings Survey (HABS)
- Students recreated historic environments in 3D by synthesizing provided measurements with information from other resources such as journals of inhabitants.



POPLAR FOREST

STATE ROAD 661 FOREST VICINITY BEDFORD COUNTY VIRGINIA


MADISON
SCHOLAR


MADISON
SCHOLAR

HARDWARE & SOFTWARE

HTC Vive

- Three VR rooms available to explore, inhabit, review, and study their virtual reconstructions.

IrisVR Prospect

- Desktop app used to bring the 3D SketchUp files into a navigable VR environment
  - Negotiated “extended trial” for semester

TRAINING & SUPPORT

- Faculty was exposed to VR through Instructional Design & Technology programming
- Digital Projects and Innovation Spaces provided training and support for SketchUp
    - Facilitated two hands-on workshops
    - Provided many one-on-one consultations with students as they worked through
    - Provided written instructions.

HIST 422 FINAL PRESENTATIONS

- Open to the public and attended by L&ET staff, history faculty, JMU administrators, JMU reporters, and parents.
- Each student presented their research by providing guided tours of their virtual environments. Wearing a tethered VR headset and projecting their virtual walk-throughs on a shared display
- The performances were theatrical and unusual insofar as the speaker was immersed in a virtual world and unable to see the audience

VIRTUAL SPACES PROJECT

HIST 422 FINAL PRESENTATIONS
December 7, 2017, 9:30-10:45 AM
Madison Union 305 (Taylor Hall)

All are invited to join the students of HIST 422: The Early American Republic as they use virtual reality to present their semester-long work studying and modeling historical spaces.

VIRTUAL TOURS OF

- **historic houses**
- **slave quarters**
- **religious and civic spaces**


MADISON
SCHOLAR


MADISON
SCHOLAR

PRESS COVERAGE

Virtual Reality Brings Tours To JMU

By PETE DeLEA
Daily News-Record

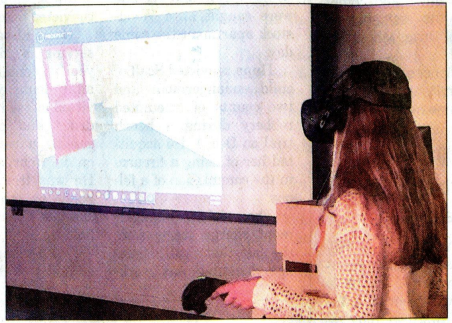
HARRISONBURG — About a dozen James Madison University students toured some of America's most historic buildings Thursday without stepping foot off campus.

The students spent the semester creating virtual reality tours of buildings built during the early American republic, the period between the Revolution and the Civil War.

"Americans of this era expressed great interest in the power of spaces to influence human character and action, for good or for ill," said Andrew Witmer, associate professor of history, who led the class. "This project springs from the conviction that space matters. It is not just a neutral backdrop for human activity. The spaces that people build express their beliefs and values."

This is the first time Witmer's used virtual reality in his classes but he's constantly looking for new and innovative ways to teach students. He partnered with JMU's Innovation Services to help teach the students how to operate the technology.

The projects ranged from Thomas Jefferson's Poplar Forest in Bedford County to the Albemarle County Courthouse.



Kathleen Olifiers, a 20-year-old junior at James Madison University, takes her classmates on a virtual tour of President Abraham Lincoln's Springfield, Ill., home on Thursday.

Pete DeLea / DN-R

Kathleen Olifiers, a 20-year-old junior from Westchester County, N.Y., decided to learn more about her favorite president, Abraham Lincoln.

Using blueprints and written accounts, she pieced together a virtual reality tour of the Springfield, Ill., home that Lincoln moved into in 1844, about 16 years before he became president.

"I thought it was definitely challenging but it was a unique way to look at history," said Olifiers, who plans on becoming a high school history teacher. "I learned not only about the space but a lot about Lincoln and his family that I wouldn't have if just took another history class and read a book."

Maria Matlock, a 21-year-old junior from Kingsport, Tenn., picked Elizabeth Cady Stanton's Seneca Falls, N.Y., home for her project. Stanton is credited with starting one of the first women's rights movements in the United States.

"I've always been interested in women's history and I wanted my research to focus on the women's rights movement," Matlock said. "I thought this would be the perfect project."

See **TOURS**, Page **A4**

'Unconventional Way To Study History'

Tours FROM PAGE A3

Sarah Fowkes, a 21-year-old senior from Frederick, Md., chose a building that sits next to the high school she attended.

Rose Hill Mano
tirement home of M
first elected governo
Johnson, is now a
museum.

Fowkes said the r
learning gave her s
for the future.

"I really liked tha

unconventional way to study history," said Fowkes, who also wants to teach high school history. "It is really going to tie in nicely with how I use technology in my future classrooms."

"Building a digital model required them to pay close attention to

JAMES MADISON UNIVERSITY. NEWS MORE JMU Search News

TOPICS COLLEGE NEWS RESOURCES PUBLICATIONS STAFF MEDIA ARCHIVE

JMU NEWS

History class goes high tech

Students use VR to get deeper understanding of people, places

BY NANFEI LIU

SUMMARY: Andrew Witmer's HIST 422 course incorporates technology to elevate learning of historic buildings from the early American republic.

ENG 420: FILM STUDIES IN 360°

- *ENG 420: Advanced Studies in Film and Media Theory*
  Taught by Dr. Dennis Lo
- Critically view and respond to 360° or VR productions similarly to traditional film.
- Optionally, produce a 5 minute 360° video essay in lieu of a traditional written essay.

VIEWING TOOLS

- HTC Vive and Oculus Rift
  - Platform exclusive titles meant having both available.
- Merge VR headsets
  - For use with students own cell phone
- Headphones and swivel chair
  - Surprisingly necessary for experiences designed around immersion.
- Dedicated space to use these tools.

AUTHORING TOOLS

- We purchased five 360° video kits
  - GoPro Fusion camera with cover and battery
  - Two MicroSD cards
  - USB-C cable and charger
  - Extendable-grip mini tripod with GoPro mount
- Adobe Premier Pro
- GoPro Fusion Studio

TRAINING & SUPPORT

- Spaces
  - A dedicated space for viewing 360° and VR content
  - The space included a ***very*** powerful desktop workstation, required both for viewing VR content and for editing 360° videos
- Publishing platforms
  - 360 videos published to YouTube and embedded in WordPress
- Training and support
  - Staff from Digital Projects, Innovation Spaces, and Instructional Design & Technology provided workshops and one-on-one consultations to teach students about 360° videography.
- Final presentations
  - A screening is scheduled for the eight students who elected to produce a 360° film. The event will be open to the public. Local reporters will be invited.

STORYTELLING WITH MAPS

- Story Maps via ArcGIS Online
  - Maps as part of a digital story that provide a geographical context.
- English - Dr. Allison Fagan
  - Students worked in groups to map locations in a series of novels.
  - Students visualize the journey of the characters and how space is represented.
- History - Dr. Phillip Harrington
  - Students mapping local historic neighborhoods.
- Justice Studies - Dr. Case Watkins
  - Students developed individual research projects
  - Example maps public opinion on the death penalty over time and place.